

EXHIBIT 1

Curriculum vitae:

Christian Isak Jørgensen:

1992: Bachelor in Biotechnology;
Department of Molecular Biology,
University of Southern Denmark, Odense

1995: Master in Molecular and Cell Biology;
Department of Molecular Biology,
University of Southern Denmark, Odense

1999: Ph.D. in Molecular Biology;
Department of Molecular Biology,
University of Southern Denmark, Odense

1999: Research Scientist;
Department of Biochemistry and Molecular Biology,
University of Southern Denmark, Odense

2001: Research Scientist at Novozymes

Since June 2001:
Responsible for Mass spectrometry and N-terminal sequencing facilities
at Novozymes

2002: Precise sequencing Training;
Applied Biosystems, Langen, Germany

2002: Mass spectrometry Training;
Applied Biosystems, Langen, Germany

2002: Biochrom Systems AAA Training;
Biochrom Ltd, Cambridge, England

EXHIBIT 2

SPEZYME® ETHYL DNA SEQUENCE

M K Q Q K R L Y A R L L T L L F A L
 1 AGAACATGA AACACAAAAA ACAGGCTTAC GCCGATTGC TGACGCTGTT ATTTGCGCTC
 TCTTAGTACT TTGTTGTTT TGCGAAATG CGGGCTAACG ACTGCGACAA TAAACCGAG

I F L L P H S A A S A A A P F N G T M M
 61 ATCTTCTTGC TGCCCATTC TGCAAGCTTCA GCAGCCGCAC CGTTAACGG CACCATGATG
 TAGAAGAACG ACAGGAGTAAG ACGTCGAAGT CGTCGGCGTG GCAAATTGCC GTGGTACTAC

Q Y F E W Y L P D D G T L W T K V A N E
 121 CAGTATTTG AATGGTACTT GCCGGATGAT GGCACGTTAT GGACCAAAGT GGCCAATGAA
 GTCATAAAAC TTACCATGAA CGGCCTACTA CCTGGTTCA CGGGTTACTAC

A N N L S S L G I T A L W L P P A Y K G
 181 GCCAACAACT TATCCAGCCT TGGCATCAC GCTCTTGGC TGCCGCCGC TTACAAAGGA
 CGGTTGTTGA ATAGGTCGGA ACCGTAGTGG CGAGAAACCG ACGGCGGGCG AATGTTCT

T S R S D V G Y G V Y D L Y D L G E F N
 241 ACAAGCCGCA GCGACGTAGG GTACGGAGTA TACGACTTGT ATGACCTCGG CGAATTCAAAT
 TGTCGGCGT CGCTGCATCC CATGCCTCAT ATGCTGAACA TACTGGAGCC GCTTAAGTTA

Q K G T V R T K Y G T K A Q Y L Q A I Q
 301 CAAAAAGGGA CCGTCCGCAC AAAATATGGA ACAAAAGCTC AATATCTTCA AGCCATTCAA
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A A H A A G M Q V Y A D V V F D H K G G
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 CGGCGGGTGC GGCGACCTTA CGTCACATG CGGCTACAGC ACAAGCTGGT ATTCGGCCG

A D G T E W V D A V E V N P S D R N Q E
 421 GCTGACGGCA CGGAATGGGT GGACGCCGC GAAGTCATC CGTCGACCCG CAACCAAGAA
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I S G T Y Q I Q A W T K F D F P G R G N
 481 ATCTCGGGCA CCTATCAAAT CCAAGCATGG ACGAAATTG ATTTCCGG GCGGGCAAC
 TAGAGCCCGT GGATAGTTA GGTCGTACC TGCTTAAAC TAAAAGGGCC CGCCCCGTTG

T Y S S F K W R W Y H F D G V D W D E S
 541 ACCTACTCCA GCTTAAGTG GCGCTGGTAC CATTGACG GCGTTGATTG GGACGAAAGC
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R K L S R I Y K F I G K A W D W E V D T
 601 CGAAAATCAA CGCGCATTAA CAAATTCAATC GGCAAAGCGT GGGATTGGGA AGTAGACACA
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Spezyme® Ethyl DNA Sequence
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661 E N G N Y D Y L M Y A D L D M D H P E V
 GAAAACGGAA ACTATGACTA CTTAATGTAT GCCGACCTTG ATATGGATCA TCCCGAACAGTC
 CTTTTGCCCT TGATACTGAT GAATTACATA CGGCTGGAAC TATACCTAGT AGGGCTTCAG

721 V T E L K N W G K W Y V N T T N I D G F
 GTGACCGAGC TGAAAAACTG GGGGAAATGG TATGTCAACA CAACGAACAT TGATGGGTTTC
 CACTGGCTCG ACTTTTGAC CCCCTTACCA ATACAGTTGT GTTGCTTGTAA CTACACCAAG

781 R L D A V K H I K F S F F P D W L S Y V
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841 R S Q T G K P L F T V G E Y W S Y D I N
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901 K L H N Y I T K T N G T M S L F D A P L
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961 H N K F Y T A S K S G G A F D M R T L M
 CACAACAAAT TTTATACCGC TTCAAATCA GGGGGCGCAT TTGATATGCG CACGTTAATG
 GTGTTGTTA AAATATGGCG AAGGTTAGT CCCCCGCGTA AACTATACGC GTGCAATTAC

1021 T N T L M K D Q P T L A V T F V D N H D
 ACCAATACTC TCATGAAAGA TCAACCGACA TTGGCCGTCA CCTTCGTTGA TAATCATGAC
 TGGTTATGAG AGTACTTCT AGTTGGCTGT AACCGGCAGT GGAAGCAACT ATTAGTACTG

1081 T E P G Q A L Q S W V D P W F K P L A , Y
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 TGGCTTGGGC CGGTTCGCGA AGTCAGTACC CAGCTGGTA CCAAGTTGG CAACCGAATG

1141 A F I L T R Q E G Y P C V F Y G D Y Y G
 GCCTTTATTC TAACTCGGCA GGAAGGATAC CCGTGCCTCT TTTATGGTGA CTATTATGGC
 CGGAAATAAG ATTGAGCCGT CCTTCCTATG GGCACGCAGA AAATACCACT GATAATACCG

1201 I P Q Y N I P S L K S K I D P L L I A R
 ATTCCACAAAT ATAACATTCC TTCGCTGAA AGCAAAATCG ATCCGCTCCT CATCGCGCGC
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1261 R D Y A Y G T Q H D Y L D H S D I I G W
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 TCCCTAATAC GAATGCCTTG CGTTGTACTA ATAGAACTAG TGAGGCTGTA GTAGCCCCACC

Spezyme® Ethyl DNA Sequence
(Page 3 of 3)

1321 T R E G V T E K P G S G L A A L I T D G
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 TGTTCCTTC CCCAGTGACT TTTGGTCCT AGGCCCGACC GGCGTGACTA GTGGCTACCC

1381 P G G S K W M Y V G K Q H A G K V F Y D
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 GGCCCTCCTT CGTTTACCTA CATGCAACCG TTTGTTGTGC GACCTTTCA CAAGATACTG

1441 L T G N R S D T V T I N S D G W G E F K
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 GAATGGCCGT TGGCCTCACT GTGGCAGTGG TAGTTGTCAC TACCTACCCC CCTTAAGTTT

1501 V N G G S V S V W V P R K T T V S T I A
 GTCAATGGCG GTTCGGTTTC GGTTGGGTT CCTAGAAAAA CGACCGTTTC TACCATCGCT
 CAGTTACCGC CAAGCCAAAG CCAAACCAA GGATCTTTT GCTGGCAAAG ATGGTAGCGA

1561 R P I T T R P W T G E F V R W T E P R L
 CGGCGATCA CAACCCGACC GTGGACTGGT GAATTCGTCC GTGGACCGA ACCACGGTTG
 GCCGGCTAGT GTGGGCTGG CACCTGACCA CTTAACGAGG CAACCTGGCT TGGTGCCAAC

1621 V A W P *
 GTGGCATGGC CTTGAGTTAA CAGAGGACGG ATTCCTGAA GGAAATCCGT TTTTTTATTT
 CACCGTACCG GAACTCAATT GTCTCCTGCC TAAAGGACTT CCTTTAGGCA AAAAAATAAA

1681 TAAG
 ATTC

EXHIBIT 3

SPEZYME® ETHYL AMINO ACID SEQUENCE

1 AAPFNGTMMQ YFEWYLPDDG TLWTKVANEA NNLLSSLGITA LWLPPAYKGT SRSDVGYGVY
61 DLYDLGEFNQ KGTVRTKYGT KAQYLQAIQA AHAAGMQVYA DVVFDFHKGGAA DGTEWVDAVE
121 VNPSDRNQEIS GTTYQIQAWT KFDGPGRGNT YSSFKWRWYH FDGVDWDESR KLSRIYKFING
181 KAWDWEVDTE NGNYDYLMYA DLDMDHPEVV TELKNWKGWV VNTTNIDGFR LDAVKHIKFS
241 FFPDWLSYVR SQTGKPLFTV GEYWSYDINK LHNYITKTNG TMSLFDAPLH NKFYTASKSG
301 GAFDMRTLMT NTLMKDQPTL AVTFVDNHDT EPGQALQSWV DPWFKPLAYA FILTRQEGYP
361 CVFYGDYYGI PQYNIPSLKS KIDPLLIARR DYAYGTQHDY LDHSIDIIGWT REGVTEKPGS
421 GLAALITDGP GGSKWMYVGK QHAGKVFYDL TGNRSDTVTI NSDGWGEFKV NGGSVSVWVP
481 RKTT

Exhibit 4

NCBI Nucleotide

PubMed Nucleotide Protein Genome Structure PMC Taxonomy OMIM Books

Search for

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Display

Range: from to Reverse complemented strand Features: SNP

CDD MGC HPRD STS

1: AF032864. Reports Bacillus stearoth...[gi:2642325]

LOCUS AF032864 1990 bp DNA linear BCT 25-NOV-1997

DEFINITION Bacillus stearothermophilus alpha amylase (ami) gene, complete cds.

ACCESSION AF032864

VERSION AF032864.1 GI:2642325

KEYWORDS .

SOURCE Geobacillus stearothermophilus

ORGANISM Geobacillus stearothermophilus
Bacteria; Firmicutes; Bacillales; Bacillaceae; Geobacillus.

REFERENCE 1 (bases 1 to 1990)

AUTHORS da Silva,A.C.R., Fernandes,E. and Pueyo,M.T.

TITLE Direct Submission

JOURNAL Submitted (03-NOV-1997) Physiology, ICB, Av Prof Lineu Prestes, Sao Paulo, SP, Brasil

FEATURES Location/Qualifiers

source 1..1990
 /organism="Geobacillus stearothermophilus"
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 /db_xref="ATCC:31195"
 /db_xref="taxon:1422"

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CDS 149..1798
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 NQEISGTYQIQAWTKFDFPGRGNTYSSFKWRWYHFDGVWDDESRKLSRIYKFRGIGKA
 WDWEVDTENGNYDILMYADILMDHPEPVTELKNWGKWWVNTTNIDGFRLDAVKHIFKFS
 FFPDWLSYVRSQTKPLFTVGEYWSYDINKLHNYYTKTNGTMSLFDAPLHNKFYTASK
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ORIGIN

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